

WHAT IS CLAIMED IS

1. A stack chip module including:

5       a substrate having a predetermined-size groove on one side and a circuit pattern, with one end being adjacent to the groove;

10       a first semiconductor chip adhered in the groove of the substrate by adhesive and having a plurality of center pads and a plurality of edge pads, electrically connected to each other, on an upper part thereof;

15       a plurality of gold wires for electrically connecting the circuit pattern of the substrate and the edge pads of the first semiconductor chip, respectively;

20       a second semiconductor chip having a plurality of center pads corresponding to said plurality of center pads on said upper part of the first semiconductor chip and the formative side being opposite to that of the first semiconductor chip;

25       a plurality of bumps interposed between the center pads of the first semiconductor chip and the center pads of the second semiconductor chip for joining and electrically connecting said center pads; and

      a molding material molding a side of the second

semiconductor chip including the gold wires, the edge pads of first semiconductor chip and the circuit pattern of the substrate.

5           2. The stack chip module according to claim 1, wherein the second semiconductor chip has a size that fits inside of the edge pads of the first semiconductor chip.

10           3. The stack chip module according to claim 1, wherein the bumps are one selected from a group consisting of nickel bump, gold bump and solder bump.

15           4. The stack chip module according to claim 1, wherein the bumps have a height of 40 to 100 $\mu$ m.

20           5. The stack chip module according to claim 1, further comprising a first heat sink adhered on a back side of the second semiconductor chip.

          6. The stack chip module according to claim 1, wherein the substrate is a printed circuit board having a shape that can be put into a socket.

          7. The stack chip module according to claim 1,

wherein the substrate further comprises a second heat sink on a bottom of the groove.

8. The stack chip module according to claim 1,  
5 wherein the substrate includes grooves arranged on both sides thereof in a jig-jag form.

9. The stack chip module according to claim 8,  
10 wherein the semiconductor chips are mounted in each groove arranged in jig-jag form on both sides of the substrate.

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